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The MANAGEMENT REVIEW

January, 1926

Setting the Pace in Business

By H. C. TOWLE, *Works Manager*
New York Shipbuilding Corp.

There are various ways of running things. I once knew a chief engineer who ran the engine of an old side-wheel steamer along the coast of Maine.

A few years ago I went up there and traveled on a modern triple screw, turbine engined, high-speed steamer, and this engineer, on account of being a senior on the line, had charge of the engines. I was surprised, and said, "How does she go?" He said, "Oh, all right. I opens the throttle and trusts in God." There are businesses run like that, but they ought not to be run that way. We ought to have some thought of our responsibilities as well as trusting the Almighty.

A certain tug boat captain in New York Harbor emphasizes to me the thought that it is possible to run things by maximum force and minimum judgment, but the results are apt to be unnecessarily wasteful. This captain was called "Four-Bells Jerry." This fellow had a nickname of "Four-Bells Jerry" because he never stopped until he was very close to the dock and then he used four bells to stop. I might mention that his tug repair bills ran four or five times higher than those of any other in the fleet. It is better to try to avoid four bells conditions in business.

I know at least one plant where they worked three shifts for a period of one month or so and immediately afterward the plant shut down to one shift, and then closed down entirely.

I want to cover the subject in three divisions. The first is setting the plant pace, then setting the shop pace, and finally setting the individual pace. I want to stick rather closely to pace-setting as my subject.

First as to plant pace. The average production man prays night and day that the sales force will bring sales in steadily so that he can keep his

conditions uniform. The production manager must have a clear-eyed view of that fact. He can considerably help his sales force by letting them know conditions of the plant. In shipbuilding we have long-time contracts. The ordinary boat takes from nine to ten months to build, and the larger vessels take from two to six years to build. The Airplane "Saratoga" has been in the plant six years, and may be there one and a half years yet or longer. The major control of plant speed involves a good working knowledge of first the cost, second the ordinary distribution of labor over the life of a contract, that is whether you do 10 per cent in a month or six months, the possible minimum economical building period for each type of vessel, and lastly the conditions as regards material supply.

Estimating Man—Hours of Labor

With knowledge of these factors I have just mentioned it is possible to erect what is called a "load curve" based on time, which will indicate the total man-hours of labor that should be normally expended in any month, with the probable division between the different contracts in process. That is accurate and gives you a rough plan for the plant. When that group is constructed, then it becomes a matter of judgment whether it is wiser to level the curve by taking the peaks and doing the work that is called for on peak conditions ahead of time, or whether it is better to instruct the sales force to go out and take more jobs to fill in these slack periods. Very frequently when you fill in slack periods, that work has to be taken at terms very advantageous to the customer. In shipbuilding for many years before and after the war, we were faced with the necessity of keeping one eye on what you might call the danger line, that is to say the minimum irreducible operating expense that must be made. If the management can correctly judge the market tendencies, and regulate to suit the forecast, the result in costs will be truly remarkable. I have seen an effort to do so cut relative costs over 35 per cent.

The second heading I want to term "Setting the Shop Pace." However well the plant pace is set, we find it necessary to give special attention to the individual shop in order to regulate the second factor—the shop pace. For instance, a machine breaks down, the material doesn't arrive in time, the customers modify or change their orders or delivery requirements, and in order to meet these conditions, the foreman of each shop is supplied with accurate shop job estimates, which enable him to distribute his shop load so as to know in advance the probable man-hours of labor needed in any week. An effort is made to eliminate the "heavy load" periods by doing the work ahead of schedule time. Then again the Sales Department gets fill-in orders in order to fill in these times. I looked up figures and the fill-in orders amounted to 15 per cent of the year's sales.

We may have one foreman with an uncanny ability for knowing how fast he ought to run his shop. On the other hand we have foremen whom it is necessary to aid with rather elaborate schedules and even then the management has to speed them up at times and at other times see that they slow down. The same reasons for setting a pace exist in the shop as in the plant as a whole. In a plant where thirty different departments exist it represents a very serious problem.

The third factor is the individual pace. The production pace is set largely by the judgment of the foreman aided by the constant records of rates and by rate-setters in departments. Practically all tools have had their capacity established by accurate time studies and proper time for set-ups and handling material determined. We have sufficient confidence in our rates to permit contracts covering the lots handled to be given to the men, the total saving in wages going to the men, and we guarantee their minimum wage. I might say for many years we ran on the old fifty-fifty bonus system in many of our shops, and we found so many objectionable features in it that we changed it. We put in many departments a guaranteed wage because men are naturally anxious about their minimum income. This has worked out very satisfactorily. Occasionally an incident occurs which shows up the advantages. For instance, we turn large connecting rods for engines. The standard time for turning is 32 hours. Sometime ago we hired an Englishman who had just come over, and who was a "Turner." He came in for a job. He looked like a good man, and we put him on the job of turning rods. He protested at the rate, and said it never could be done in 32 hours. It took him 60 hours to do the first one. Then it was turned over to one of our regular turners, who did it in 19 hours, just because he had acquired skill enough. His financial reward was something in proportion.

Job Contracts for Installation Work

On installation work our usual setting pace method is to give out "job contracts," taking in the work of the whole gang. A squad of electricians will take the contract for doing all the electrical work on a vessel. Their earnings are guaranteed individually and any balance left over is split up among the men on the basis of their actual earnings. I might say that foremen and assistant foremen do not participate, but the leaders of the individual gangs do.

We have still another class of department in the shipyard where material passes from machine to machine. For instance, material is made up, goes to a layer-out and then to a puncher and through to each machine in turn. The present method is to give the contract to a shop for the whole job. The foreman makes his individual estimate. I have my estimate as to what the job is worth and we agree on the figure. The time on the con-

tract is kept by the usual methods and the costs put on the bulletin board every day, so the men know, and at the end the money balance is split up in proportion to the daily rate. Of course the daily wages are paid week by week, and this extra bonus is paid at the end of the contract. Maybe two or three months may elapse before they get their bonus.

Rate-Setting in the Iron Working Department

In what we call our iron working department, we have another method. For many years the method was to pay the men for straight piece-work. That is handled entirely by the foreman of the department.

We have found that the only just and equitable way of handling that class of piece-work is to have a high-grade foreman in whom you have absolute confidence, who has the interest of the company at heart, and who has a keen sense of justice of what is due the men. This foreman sees every job and he sets the rate on it. Of course, the foreman has in his mind the average rates determined over a long period of time, and which have been tabulated. The only answer I can give to a number of questions which may arise on that is that the costs in those departments are favorable as compared with those of our competitors, and the foremen find they can send to almost any place in the United States and get their men back. Some time ago we wanted some riveters, and we sent for four or five who were working on the Great Lakes. They came back.

Besides the wage incentive we try to furnish a steady job to hold our men. More than half of our men have been with us for more than fifteen years. I was talking to a painter the other day, and he mentioned that a brother of his who was working at house painting did not make within \$200 of his wages, even though his rate was much more per hour. I feel very grateful to the income tax statements for providing men with such information.

By far the greatest saving in cost and increase in production has been due to changes of method instituted by the management.

First is the proper subdivision of responsibility. Wherever we find a department correcting bad workmanship done previously in another department, we try to determine if the division of responsibility is correct. We had one case with a vessel during the war. When I went up the side of a vessel, I noticed that the material was not in the right position, the first plate was $1/16$ " low, then $1/8$ " and up to $5/8$ " at the top. That meant the next department which went on the job had to, by sheer strength try to pull it back into position.

There were two departments trying to get the maximum earnings, and the first department was leaving the hard work to the next department. The

solution was very simple. We took the men who did the work in the second department and transferred them over to the first foreman, and said, you are responsible for the whole job, and the material not only must be put up, but correctly placed. This corrected the trouble, and cut down the cost considerably.

Efforts also have been made to eliminate "waiting time." We don't know about other businesses, but men waiting around for a new job is the worst trouble we have. It may be because material may not have arrived. On a vessel we have comparatively restricted space with perhaps 1,000 men at work. We can't supply more than a few days' supply on the vessel at one time. There isn't room for it. On the other hand, if we put men there and they have to walk up to the storeroom to get the material, it involves too much waste of time. This was remedied by putting up a small storeroom on each vessel and putting a versatile and capable storekeeper in charge, who keeps the material on hand for at least 24 hours work, providing him with proper facilities. He keeps each department at work on that vessel supplied with material for 24 or 36 hours ahead. He knows if he gets any complaint, he is going to hear from us, and generally the material is there.

Three Factors of Delay

There are three other serious factors of delay—waiting for assignment of work, awaiting completion of inspection, and awaiting adequate tools with which to do the work. Those delays are all within the control of the leaders who directly supervise the men, and who are constantly subject to check by the department foremen. Here, of course, the management may sometimes step in and change the routine to the benefit of everybody.

In one case work was formerly done by two departments in this sequence. The gang of the first department was put on a job with a foreman and completed about two-thirds of the work. That part of the work had to be inspected and released. Then the foreman of the second department was notified and his men did their part. Then it was inspected. He sent in his men and did his work and the work was returned and released, and the first foreman was notified that the gang was available. When they got ready the work was again inspected. When the first gang was available, they completed the operation. That work was then inspected and released, and the foreman of the second department was notified, and if the gang was available, then operation No. 2 was completed. The work was inspected and released to the next department. There were eleven different operations, with potential delay between every operation. In the face of considerable prejudice and opposition, we tried something that had never been done before. We put a competent and alive young man on the job of picking men to do both oper-

ations. The operations now are only two, and after the work is done by the first gang, it is released to the second, and then sent out to the third gang, and, on account of close fixing of responsibility, poor workmanship stopped. We know where to place responsibility. This made a great difference in cost. These people used to receive the same hourly rate as common labor. In 1912 it was 15 cents an hour. Now it is 40 cents. Under this new arrangement those men are averaging 70 cents an hour instead of 40 cents. In other words, while wages under this period have increased 166 per cent and actual earnings have increased 368 per cent, the actual cost in money has only gone up 28 per cent since 1914. If a little examination into waste can do so much in our business, it certainly can in others.

One other point interested me. The breakage of tools ran very high. The scheme was adopted of posting the list of tools used by each man each week. If it was known that a man had lost or broken too many tools, his job wasn't very secure.

A Quality Product

One wonders if there is any place left for the careful, plodding mechanic, whose chief god is "a good job." Speed, speed and more speed seems to be the cry; but in shipbuilding we have many jobs where accuracy is the chief consideration. In a modern battleship turret, with two 16" guns, the guns are about six feet apart on centers. They are mounted on a track 33 feet in diameter. Let us say there are four turrets on the vessel. The tracks of all four turrets must be absolutely parallel and the guns so nearly parallel that the shots reaching the target 12,000 yards away from the guns will not have crossed, and have diverged less than 10". All this in a structure designed to stand a recoil shock of over 2,000,000 lbs. Say there are 8 shots. They have to strike within a very small area, say 20 or 30 feet square with the ordinary-sized trial target. To hit this target there must be absolute accuracy. The shells on one of our recent boats shot from a pair of guns at 12,000 yards range, did not cross and the divergence was only 10". That meant that the gun 60 feet long had a divergence of less than 1/64" in the length of the gun. It generally takes ten years to educate a good shipyard mechanic to do this class of work. Do you wonder that the Ten-Year Naval Holiday is looked on by shipbuilders as a calamity, not on account of the shipbuilders themselves, but for the sake of the country if they want battleships in the future.

To me, the setting of individual pace seems merely, in the first place, a matter of adequately planning methods, secondly, adequate supervision and discipline, and thirdly, adequate opportunities and incentives for the men and foremen. It seems very simple—as simple as the efficiency man's formula for a good rate-setting system. First find the good rate-setter.

THE MANAGEMENT INDEX

Abstracts and News Items

GENERAL MANAGEMENT

The Super Trust Arrives in America

The trust has become exceedingly varied and complex. The Ford Motor Company, for instance, does not only make automobiles; it cuts trees, saws timber, mines coal and ore, runs a fleet of steamers, operates a railroad and owns whole towns. It is the super trust that has made possible the great economic miracle, the expansion of profits with reduced prices and increased wages.

The risks to the public are of course profound. How far the executives may be allowed unrestricted power will depend largely upon their statesmanship and human understanding. By Evans Clark. *The New York Times*, Dec. 13, 1925.

Sherman Act Checks Trade Co-operation

As long as American business continues to be "governed from the grave" its efforts to co-operate for the elimination of waste in the distribution processes will be only makeshifts. That seemed to be the opinion of several hundred business men attending the National Distribution Conference in session here by the United States Chamber of Commerce. Although the conference took the first step toward the establishment of systematic self-government of business, prediction was made that most of the really effective proposals would run counter to the Sherman Anti-Trust law. The conference approved the report

of a committee headed by A. Lincoln Filene of Boston, proposing the creation of a joint committee on trade relations to act as a clearing house for business and to set up standards of ethical and economic business practice. *New York Evening Post*, December 16, 1925.

Team-work by Sales and Manufacturing Departments

The Dodge Manufacturing Corporation took the first step in co-ordinating its selling and manufacturing departments by making everyone around the place, including the office boys and the stokers in the boiler room, visualize the reason for being in business. That is, they were made to realize that they were not there primarily to make industrial machinery, but to sell it. Then it naturally followed that the sales and advertising departments learned to pull together as one. This team-work spirit has been found highly valuable in keeping up the morale of the whole force. By George C. Miller. *Printers' Ink*, Dec. 10, 1925, p. 3 4½.

Outlining the Pitfalls of Industry

Existing conditions are treated in this article which is the first part of the series, and what may and does occur to industry is told, with a terse statement as to how and why it occurs and how and why it can or should be circumvented, or drastic remedies applied. By Edwin J. Prindle.

American Industries, December, 1925, p. 9.3½.

Sales Ideas to Stabilize Production

The president of the Tao Tea Company believes that trying to run a business from the factory end is wrong. Instead of having the factory announce it has this and that to move, the sales department, after a careful analysis of market needs, should set a quota of saleable items 20 per cent higher than the factory capacity, and

should drive the sales force toward that quota as a goal, notifying the factory of the quota and making it keep up with sales. When the factory gets too close, sales should be driven harder.

As nothing is more costly than peaks and valleys of production so nothing is surer to solve them than better directed sales efforts and new ideas. Based on an interview by Roy Dickinson with Col. J. W. O'Mahoney. *Printers' Ink Monthly*, December, 1925, p. 39:2½.

FINANCIAL MANAGEMENT

Automatic Solvency

If a business is conducted on a basis of never spending more than ninety per cent of what was received during the period immediately preceding, an automatic reserve is established and over-expansion becomes impossible. But it must be understood that spending should not simply mean the cash disbursements for a current period but include all purchasing done during that time no matter when the financing of that purchasing falls due.

The results of this system are that if any business will control its expenditures at their source, and as fast as obligations are incurred by the placing of an order, the engaging of an efficient worker or the purchase of materials, will immediately deduct these from the budget for that classification of expense, then the business is going to spend less than it takes in. Details are given as to how an executive can know each day where he stands. By James H. Rand. *Kardex Service*, Oct., 1925.

Budgeting

The Vice-President of the Guardian Trust Company gives his experience with many industries, and outlines the set-up of a budget for a company manufacturing household articles. In 1924 the actual sales came within from 3 to 4 per cent

of the sales volume set by the budget and within $\frac{1}{2}$ of 1 per cent of anticipated sales expense. The manufacturing division produced the volume of merchandise necessary to meet sales demands at 1 per cent less expense than allowed by the budget. By H. I. Shepherd. *System*, Dec., 1925, p. 699:3.

Jersey Labor Will Open Bank With \$5,000,000 Capital

Forty-one Hudson County Locals are cooperating to build a 15-story bank building in Jersey City. These locals have agreed to take \$1,000,000 of stock. This makes the sixth Union Financial Group in this area. Officers of the Brotherhood of Locomotive Engineers, who have been active in the labor union invasion into the financial field, are assisting Mr. Brandle, the Jersey labor leader. The new bank's purpose is to "finance any and all matters pertaining to the welfare and management of labor unions in the State of New Jersey." *New York Evening Post*, Dec. 16, 1925.

What Information Does the Banker Want in Connection With Commercial Loans?

The three "C's" on which all credit structure rests are character, capacity, and capital. The bank needs certain side lights on the bank balances, notes, inventory (cur-

rent or obsolete) commitments, bonds, investments, etc. Some banks require the year's profit and loss statement, that they may judge the relation of costs, salaries, etc., to sales and profits.

The value of the audit depends largely on the auditor's sincerity and honesty. The client pays for the audit, but the auditor's signature gives it the endorsement of his reputation for integrity and diligence. It is his audit. By Walter H. Johnson, Jr. N. A. C. A. *Bulletin*, Nov. 16, 1925, p. 204:3.

The Financial and Industrial Investigation

In the matter of perspective a business sometimes needs some outside service or technical aid to arrive at the solution of a problem. Even the chief executive of a concern may be biased by experience, training or inclination so that his viewpoint may be distorted. Three elements of a financial and industrial investigation are: 1. The equipment of business, which includes buildings, equipment, machinery, personnel and product. 2. The mechanism for controlling and directing the use of this equipment, which may be termed management. 3. The conditions under which this equipment must be used by management in order to result in earnings. These conditions include competition, markets, location, demand, transportation, general prosperity or depression, monopoly, etc. *Management in Manufacturing*, Dec., 1925, p. 325:4.

A Bank's Function in the Capitalization of an Industry

The work of the accountant is so intimately related to many of the financial features of the average business, that a fuller appreciation is needed of the banker's attitude toward certain phases of the financial plans and policies of a business. In broad outline the financial problems of any company may be classified as those relating to original or fixed capital finance, and those dealing with the financing of current operations. The first relates to what may

well be termed vested capital; the second, to the company's working capital. By H. I. Shepherd. N. A. C. A. *Bulletin*, Nov. 16, 1925, p. 197:6.

The Joint Stock Bank—A New Investment Opportunity

The double advantage of the joint stock bank is enjoyed by the farmer who can secure long term loans usually for a period of 33 years, and by the investor whose money is secured by excellent agricultural property the value of which insurance companies and other financial institutions have known and profited by for years. The joint stock land bank can now secure the advantage of diversification through the large numbers of mortgages deposited with them as securities. The investor receives the additional protection of having a group of experts pass upon the original selection of farm mortgages and also because all issues must meet the requirements laid down by the Federal Government and be approved by it.

The profits to the stockholders of the bank are larger than is often realized. With the funds all employed, a gross income of 21 per cent per annum is not unusual. By Walter E. Lagerquist. *System*, Dec., 1925, p. 666:2.

Report Defends Banker Control of Industry

The report of the Investment Bankers' Association asserts that bankers stake both their reputations and their money when they take over the control of industrial enterprises. Rarely do the bankers go out to gain control. The problems are brought to them for solution, and even then they rarely get enough stock to have an absolute or a sinister influence. Though they may sell much non-participating stock, the buyers get what they want, and would not use the weight of the small influence due them on their small investments. Moreover, regardless of the bank or of these small investors, there are nearly always a

few large holders who determine the character and policies of the concern. *New York Herald-Tribune*, Dec. 11, 1925, p. 33:34.

Known Costs Bring Greater Profit

The sixth article in the series on management in southern furniture plants. A chart and several tables reflect the data from which these costs are secured. When costs can be presented in total and compared with predetermined standards the interest of the foremen can be enlisted in securing cost reductions. Cost and operating records can be made to serve as a definite means for improving management methods. By Charles F. Scribner. *Management in Manufacturing*, Dec., 1925, p. 349:4.

Federal Reserve Discount Policy and the Diversion of Credit into Speculative Channels

Public attention is once more centered keenly upon the rediscount policy and influence of the Federal Reserve System as a means of preventing incipient inflationary tendencies, revealed in stock market excesses and land booms, from invading the field of legitimate trade and industry. The recent increase in the Boston Federal Reserve Bank discount rate, whether intended as a warning or not, certainly had the effect of imparting a sobering restraint upon stock

market speculations. As a frank statement of prevailing credit conditions, the dangers inherent in an over-extended collateral loan account and the exercise of Federal Reserve functions to safeguard industry, agriculture and business generally, the conclusions presented by Mr. Miller deserve most thoughtful consideration, especially in banking circles. By Hon. A. C. Miller. *Trust Companies*, Nov., 1925, p. 589:3.

Europe Regaining Political and Economic Poise

While abroad, just recently, the author conferred with leading bankers, financiers and statesmen of the different nations, and summarizes herewith the impressions which he derived from an expert study of current economic and industrial conditions. As head of the foreign banking department of the Illinois Merchants Trust Company of Chicago, Mr. Dean visited England, France, Germany and other continental countries with the special object of obtaining a true knowledge of affairs and ascertaining prospects for closer banking and financial contacts. Although expressing a very hopeful viewpoint he does not underestimate or fail to give emphasis to pressing problems that call for honest endeavor toward permanent peace and proper regard for sound economic formulas. By H. G. P. Deans. *Trust Companies*, Nov., 1925, p. 592:3.

OFFICE MANAGEMENT

Space: *Location, Equipment, Arrangement*

The Design of Office Chairs

A wooden saddle seated chair is the most comfortable and practical for clerical office use. After a chair has been adjusted to the proper height for a clerical worker it should be numbered or tagged in some way so if displaced it can easily be identified. The Department of Simplified Practice has now under way a study of office desks, which will be followed by an attempt to

simplify office chairs. By Wells R. Bill. *The Office Manager*, Dec., 1925, p. 377:2.

Intangible Factors that Influence the Office Layout

Limiting the private office space to the minimum will contribute much to the production and economy in any office. Various methods of sound treating a room in which several people need such protection is one way of obviating expensive individ-

ual rooms. Chief of the undesirable features of private offices is the shutting off of light and ventilation and the lack of mobility that prevents changes in the layout to meet fluctuating conditions. Usually the work done in private offices does not warrant the monopoly of light and air, and it would be far more equitable to place clerks and those who have to use their eyes all day where there is the best light. Fix-

tures for artificial lighting should be chosen for their effectiveness rather than for artistic appearance. The arrangement of departments in an office should be according to the flow of work, rather than because of any personal contact between executives. Salesmanship of the highest order must be used in reorganizing space. By Warren D. Bruner. *The Office Manager*, Dec., 1925, p. 375:2.

Organization: Job Analysis, Employment, Pay, Tests

Partially Standardized Tests for Junior Clerk

The Bureau of Public Personnel Administration has developed with the assistance of several psychologists and others, a set of ten tests for the junior clerk comprising: 1. copying and adding; 2. business information; 3. alphabetical filing; 4. understanding of printed literature dealing with office problems; 5. social intelligence; 6. understanding and following written directions; 7. completion of tabulations; 8. memory for oral directions; 9. abstract intelligence; 10. education and experience. An extended discussion of the factors in developing these tests is followed by an appendix giving the tests themselves. Several tables giving scores of those who have taken the tests (usually High School seniors) illustrate their value. The tests appear to work well in the judgment of experienced personnel administrators and psychologists and they show a proper spread of scores. *Public Personnel Studies*, Dec., 1925, p. 346:27.

How the Macy Store Trains Its 7,500 Employees for Efficiency

Each new sales clerk averages a week in the classroom of which there are seven where a group of the instructors spend their entire time in training. Each worker, from porter to manager is instructed. After employees have been in the store for some time their work is followed up by divisional teachers, and those who need it are given supplementary training. Outside courses

for ambitious sales clerks are arranged at Columbia, New York University or the Metropolitan Museum of Art. By Pauline Woodhull. *Store Operation*, Dec., 1925, p. 10:2.

Get the Job You Want

Practical advice as to how to apply for a position. A simple but effective method of self-administering vocational guidance is to divide all types of work into tasks which pertain to People, Ideals, Numbers, Things and then rate oneself accordingly. By Eugene J. Benge. *Ambition*, No. 12, p. 1:3.

Jobs for Women

An imposing array of statistics seems to indicate that various jobs held by women in business and industry have increased up to 289 per cent during the period between 1910 and 1920, while the same jobs held by men in some instances have decreased. Since the war the number of women who earn incomes large enough to be taxed has tripled. Some of the propaganda against the economic independence of woman arises from a hysterical concern for the welfare of the race, but there is also the wail that married women are taking jobs away from men and single women. When our system of housekeeping and personal service becomes more efficiently managed it will be seen that the woman who does her own sewing or housework will be regarded as eccentric, just like the man who insists on repairing his own automobile. The same

statistics can be bent to varied uses. By Ruby A. Black. *The Nation*, Dec. 9, 1925, p. 648:2.

Graphing the Mass Mind

In its endeavor to discover the real causes of industrial unrest the personnel department may utilize the controller's department to analyze and graph conditions affecting different groups of workers. Surprising discrepancies are brought to light in this way. The work of the controller in many cases includes charting other matters than the current labor turnover, the different wage levels in various departments, and local costs of living. By Whiting Williams. *Management*, Dec., 1925, p. 41:234.

Do You Promote Office Employees?

The strengthened morale stimulated by merited promotions is apparent to the most casual observer. There are also definite savings in money and energy when a promotion plan functions so that when the head of a department is removed everyone moves up and the only addition necessary is a new office boy or clerk. Careful selection of employees is a fundamental to the development of an adequate promotion plan.

Benefit Systems and Incentives: *Pensions, Profit Sharing, Suggestions, Vacations, Stock Ownership*

A New Bonus Method

The plan in question seeks to stimulate team work as well as individual enthusiasm. The teams are ordinarily the employees in a given department. This tends to promote team work within the department, because the bonus is to the group primarily and to the individual secondarily. The next step is to create team work throughout the entire organization, which is done by the goal method; the accomplishment in the same month in a preceding year is first ascertained, then this is adjusted for differing conditions as between that month and the current month. *The Pace Student*, Dec., 1925.

There should be a complete history card of each worker, indicating the kind of work in which he is most interested. The question of transfers deserves an important place in the personnel program. A complete index of worker's qualifications reflected from a set of personal specification cards will facilitate transfers. By E. J. Benge. *The Office Manager*, Dec., 1925, p. 378:5.

What Attracts to a Job?

Experience has shown that regularity of hours is a big factor in office labor turnover. However, standardized hours are considered the rule, as the result of this questionnaire shows by the lack of consideration given it. Other factors, as compiled from two thousand applicants, are: office environment, 430; opportunities for advancement, 425; initial salary, 389; location of office, 148; the firm itself, 136; duties involved, 107; immediate superior, 61; working hours, 37; fitness for the job, 34; duration of employment, 21. The quality of the job, that is the physical and the human associations of a job, seem to count for at least as much as the pay envelope. *Industrial Relations*, Nov. 21, 1925, p. 3283:1½.

Business Christmas Presents

The practice of giving a bonus, which is really part of the salary, but paid at Christmas time, and a gift based on length of service, or amount of salary, or both, varies with company policy. The difficulty of arriving at a possible yearly bonus rate is that the poor years do not warrant it and dissatisfaction results. A profit-sharing plan is something else again. Some companies offer company stock to their employees at the first of each year. Others have a combination bonus, profit-sharing and commission plan. Still others give a definite sum of money regardless of salary or length of service. While the latter may

not be scientific or logically fair, it is simple, and frequently found in small concerns. By John H. MacDonald. *The Office Manager*, Dec., 1925, p. 373:2.

Good Wall St. Folk Get Xmas Bonus

The bonuses declared are: Cullen & Drew, 1 month's salary; Harriman & Co., 20 per cent of year's salary; Textile Banking Co., 10 per cent; Hornblower & Weeks, 8 weeks' salary; Charles W. Hill & Co., 10 per cent annual salary; Vought & Co., 5 per cent; Longacre Bank, 3-5 per cent, semi-annually; Johnson & Wood, 5 weeks' salary; The Empire Trust, 8-16 per cent. The National Fuel Co. has declared an extra dividend of \$2.00 per share and the Greenwich Bank an extra 2 per cent dividend on its common stock. *The New York Evening Post*, Dec. 16, 1925.

Records: Forms, Charts, Cards, Files, Statistics

Which Records Should I Keep and Which May I Safely Destroy?

Some general rules are laid down as the result of wide investigation. If these rules are followed the accumulation of records, involving expensive protection, may be reduced to a low point.

In the case of corporation records the capital stock and stock transfer registers, registered bond ledgers, minute books of stockholders, directors and executive meetings, general code and cipher books, deeds and title books to property and mortgages should be kept permanently.

Cancelled stock certificates, bonds, and paid interest coupons need not be kept permanently, but a clear record of their destruction should be retained. Record of interest coupons paid, lists of holders of voting securities presented at meetings, and contracts respecting securities of the company, leases and agreements, should be held for seven years.

Group Insurance

The employees of the Blackstone and Drake hotels have recently been covered with group life insurance. The contract is written on the non-contributory basis and the amount of insurance to each employee is determined by length of service. There has already been a death claim since the date of contract, October 8, 1925. *Drake News*.

Group Life Insurance

Gift of group life insurance to its 40,000 employees has been announced by the Great Atlantic and Pacific Tea Company. The plan of insurance grants amounts ranging from \$300 to \$10,000 per employee, depending on length of service and position held. The employees may purchase additional amounts of insurance ranging from \$500 to \$5,000, dependent on the salary received. *Industrial News Survey*, Dec. 14, 1925.

Among records which should be kept permanently are bookkeeping records and expenditure records; most purchasing and store records may safely be destroyed after seven years. *The Canadian Manufacturer*, Nov., 1925, p. 20:3/4.

Well-Planned Forms and Methods Assure Accurate Inventory

The comptroller of the Ernst Kern Store in Detroit explains in an interview the system used to make a winter and summer check on stocks. Five forms which facilitate the listing of goods are shown, and the experience of this firm is that while an inventory may be taken with fewer and more simple forms, the ones shown are necessary to an accurate listing consistent with the needs of a large store. Their records are kept so that they can make a comparison at cost or retail at any time during the year. By H. L. Lawson. *Store Operation*, Dec., 1925, p. 5:3.

PRODUCTION MANAGEMENT

Plant: *Location, Lighting, Heating, Ventilation.*

The Modern Manufacturing Plant

E. R. Squibb and Sons complete the first unit of a thoroughly planned new building program. A complete detailed description of this plant is given, telling how necessities in construction were harmonized so as to give a unified, pleasing effect. Daylight construction and natural ventilation are used throughout. Metal chairs with special wood backs are provided for girls who can sit at their work, and there are rest rooms for use during noon hour and recess periods. A cafeteria accommodating 200 is also used for social gatherings and conferences of executives and department heads of laboratories and plants. An emergency hospital and dental clinic are also included. A table giving a summary of data on this plant is shown. *Management in Manufacturing*, Dec., 1925, p. 339:4.

Ways of Obtaining the Best Lighting

A consideration of how to plan factory illumination and maintain equipment with emphasis on cleanliness. Charts show the effect of cleaning equipment and renewing lamps. Direct, semi-direct and indirect systems are discussed. Four steps to be car-

ried out in the design of a general lighting system for a room are: 1. Decide the foot-candle illumination required. 2. Select the type of lighting unit best adapted to the location. 3. Determine the location of outlets, the mounting height and number of units required. 4. Ascertain the size of lamp which will provide the foot-candles desired. By A. G. Anderson. *Management in Manufacturing*, Dec., 1925, p. 345:4.

Ventilation in the Light of Modern Research

Although it is now generally accepted that the cooling power of the atmosphere is the chief factor in ventilation, little use of this knowledge has as yet been made. In industrial plants sufficient attention has not been paid to this factor. Workshops may have elaborate ventilating systems, but they are usually based on principles that ignore this whole question. Hence they are not efficient in keeping the atmosphere in a condition that does not put undue strain on the heat-regulating mechanism of the body. By F. M. R. Bulmer. *Industrial Canada*, Dec., 1925, p. 49:1½.

Industrial Economics: *Labor and Immigration*

Wages, Earnings, Living Costs and Productive Efficiency

Here are figures that give the cost of living as 55 per cent more than in 1916, average employee earnings per hour as 122 per cent greater, and average earnings per year as 83 per cent greater. Productive efficiency is greater and unquestionably is largely due to improved morale and better work of employees. However, the property investment per employee is 25 per cent greater than in 1916, the average earnings

83 per cent greater, but due to shorter hours, the increase in transportation output per employee is only 5 per cent greater. For the last five years the railroads have lost money. They intend to keep the rates and wages stationary until they have made adequate profits to offset these losses. *Railway Age*, Nov. 28, 1925, p. 977:1½.

The Progress of Co-Operation in the United States

Instances are given of successful types of co-operation in the United States. Notable

among these are three non-profit-seeking co-operatives in the heart of New York City. Two training schools are giving courses for co-operative employees and executives.

In Europe, co-operation is standardized, and experimentation is passed, but it is only recently that the movement has made much progress in this country. However, co-operators are at last building solidly and laying deep foundations. By Agnes D. Warbasse. *American Review*, Nov.-Dec., 1925, p. 706:12½.

The Co-operative Movement and Co-Operative Law

A short account is given of the principal types of co-operative legislation at present in force. The importance of co-operation in the science of law is growing, and in most countries a system of legislation on co-operative societies is now taking place. The condition for a system of legislation directly adapted to co-operative societies, which will apply to all co-operatives and to them alone is then examined. By A. Egger. *International Labour Review*, Nov., 1925, p. 609:25.

Employment: Classification, Selection, Tests, Turnover

Greatest Waste in Industry Is Unused Brain of Employee

Executives of industry must find a real incentive that will induce employees to put their hearts into their work and reduce the enormous toll of present wasteful methods. Increased wages, increased vigilance or increased discipline have all been tried and have not met with great success. Another article is to follow, laying out a definite plan as to how to get men interested in building men and putting mind, body and soul on the job. By Norman Sprowl. *Pacific Factory*, Nov., 1925, p. 38:2.

A Systematic Scheme for an Employment Policy

A policy designed to restore the equilibrium between the supply of labor and the demand for it must consider not one factor of either supply or demand but all factors of the whole problem—the conditions of unemployment, the needs of industry and the capacities of the workers available, and such intimately related factors as prices, currency, emigration, and the distribution of work both in time and place.

From these general considerations, a scheme for a comprehensive employment policy is outlined, which considers at once the ordinary problem of filling normal vacancies in industrial employment from the available reserve of man-power, and the extraordinary problems of large-scale unemployment in periods of depression.

In addition, an employment policy must base its measures on the shortage of work or of workers, on the labour market as it actually is, and therefore accurate statistics are essential for an effective employment policy. By Dr. Berger. *International Labour Review*, Nov., 1925, p. 634:16.

A Forenoon in the Employment Office

This is the story of the employment manager of the Oakland Motor Car Company and five typical foremen. It emphasizes the necessity of co-operation between the employment department and the foremen in the shop, so that the right men may be employed with the least friction. By G. L. Gardiner. *The Foremen's Magazine*, Nov., 1925, p. 9:3.

Employee Service:—Hygiene, Recreation, Lunch Rooms, Stores

A Health Program

A plan to expand industrial health and welfare work into the homes of employees has been determined upon by a large print-

ing company in Chicago. The records now available point to possible co-operation of a first-aid department through follow-up work with the general superintendent in

better placing of the employees as regards the particular kind of employment in the company's plant. *Industrial News Survey*, Nov. 23, 1925.

Analyzing the Health and Accident Records of a Decade

The experience quoted here is that of the Edison Electric Illuminating Company of Boston, since the beginning of its medical department in 1913. The article is illustrated by tables giving the statistics for absenteeism due to various diseases, accidents, and all causes of disability. By H. W. Moses. *National Safety News*, Dec., 1925, p. 13:34.

Industry Prevents and Remedies Workers' Eye Defects

Many contributions have been made since the war in establishing facts concerning eye defects, but very little seems to have been done in following up these observations in order to prevent or eliminate them. With this in mind, through the co-operation of the Electrical Testing Laboratories in New York, an opportunity was afforded the author in 1920 of examining their employees and checking up these workers every year thereafter. Dr. Smith says "Industrial concerns availing themselves of periodic eye examination will find a progressive decrease in the number of workers with subnormal vision and the complaints incident thereto, a better morale amongst their personnel and a more efficient working organization. By James W. Smith. *The Nation's Health*, Nov. 15, 1925, p. 729:2.

Type of Medical Service Varies in Industrial Plants

The survey made by the Philadelphia Health Council and Tuberculosis Committee co-operating with the Philadelphia Association of Industrial Medicine gives many figures and comparisons between the medical work of plants including 34 having 1,000 employees or more, 28 plants hav-

ing from 500 to 1,000, 20 plants having from 300 to 500, and 26 plants having less than 300. It shows that 213,269, or 78 per cent of the employees, have some form of medical service available. By Harvey Dee Brown. *The Nation's Health*, Nov., 1925, p. 738:3.

Employees Save Nearly Half a Million

Endicott-Johnson does not stop with the weekly wage. As an organization composed of all the co-workers, it assists in everyday problems, as for example in housing and home-owning. The medical department is ready to serve E.-J. workers at instant notice without cost. The stores, described in this article, are non-profit institutions, established to enable E.-J. workers to make their dollars go further. The store, which was in a small way begun by the employees, is a self-service store. Last year the employees saved nearly half a million dollars by buying at cost in this store. By Louis Spilman. *Commissary*, Dec., 1925, p. 13:2.

New Method of Indicating Fatigue

The relation between work done and the carbon dioxide exhaled in the breath was observed and recorded in the case of two firemen, and the average power loads on a central station are indicated in their relation to the average carbon dioxide content of firmen's exhalations. The author concludes that: 1. Maximum CO₂ in exhalation is an index of full load on the muscles. 2. Decrease of CO₂ content in spite of continued work indicates overload and is a signal of fatigue. 3. Age and size of the worker influence the CO₂ content. The younger and lighter men produce more work with the same CO₂ discharge than the older and heavier men. 4. Peaks in the CO₂ curve immediately follow exertions. 5. Training of workers considerably reduces CO₂ exhalation for the same release of productive work. 6. The efficiency (biological) of work decreases and the expenditure of energy per

unit of work increases as work continues (per day or week). By Walter N. Polakov. *Management in Manufacturing*, Dec. 1925, p. 343:2.

Training and Education: Schools, Libraries, Apprenticeship, Employee Publications, Bulletin Boards

Foreman and the Labor Turnover Problem

The points discussed cover such aspects as the reason for keeping turnover records, how foremen help in estimating turnover cost, the cost of breaking in a worker, the length of time a new worker stays, and the average age of foremen. By J. K. Novins. *The Dodge Idea*, Nov., 1925, p. 13:2½.

The Beverly Industrial School

This school teaches boys the machinist trade. It is under the management of a board of seven trustees consisting of the mayor, five members of the school committee, and a representative of the United Shoe Machinery Corporation, with the superintendent of schools as secretary and

executive officer. The course covers about two and one-half years in the school on part time; that is, one week in the school and one week in the factory. The boys are then put into the factory on full time for several months at a minimum of 45 cents per hour and are given piece work. Then they are placed on the company's payroll as journeymen machinists.

Stress is laid upon the fact that the machinist instructor takes his class with him from the school to the factory, and is with them during the week, and then returns with them to the school for the following week. This allows him to keep directly in touch with his class, and he does not depend on reports from other people. By George H. Vose. *Industry*, Nov. 21, 1925, p. 6:1.

Benefit Systems and Incentives: Group Insurance, Pensions, Vacations, Profit Sharing, Wage Plans, Suggestions, Stock Ownership

The Barth Standard Wage Scale

This wage scale is constructed on the basis of a geometric progression rather than an arithmetic series. With the use of a slide rule beginning at 10 cents and proceeding to \$3.00 per hour a set of rates varying about 15 per cent may be determined by placing the 1 mark on the slide opposite to 1.15 on the fixed scale, and reading the following figures: 10, 12, 14, 16, 18, 21, 24, 28, 32, 37, 43, 49, 56, 64, 74, 85, 98, 1.13, 1.30, 1.50, 1.72, 1.98, 2.28, 2.62, 3.00. Considerable clerical economy results from the use of a limited number of rates, and the elimination of fractions. By Carl G. Barth. *Management in Manufacturing*, Dec., 1925, p. 357:1.

Status of Industrial Workers' Pensions Plans in the United States

In the report just completed by the National Industrial Conference Board pension plans are divided into formal and informal plans. The present tendency among the larger employers favors the formal, as close personal contact between employer and employee becomes impracticable where there are a large number of employees. The formal plans fall into two main groups, the contributory and non-contributory. Out of the 248 pension plans studied only 28 were of the contributory type. In regard to the obligations undertaken by the employer, pension plans are divided into contractual and discretionary types, the obligation under the former requiring very sound

financing, while the latter is more flexible in its financial requirements.

There is no grave apprehension felt that pension plans cannot operate privately without State or other outside help, as is expressed in many other quarters. *The Economic World*, Dec. 5, 1925, p. 818:1.

Group Insurance

Group insurance has been arranged for the employees by the Fort Pitt Steel Casting Company of McKeesport, Pa. The insurance has been contracted for without restrictions as to age or physical condition and includes a permanent disability provision. *Iron Age*, Dec. 17, 1925, p. 1674.

Mutual Benefit Association Prosperous

Membership in the Mutual Benefit Association of the San Joaquin Light and Power Corporation is voluntary, the employee authorizing a payroll deduction amounting to 20 per cent of one day's wages per month. To this the company adds an amount equal to the sum of the employees' deductions. The average cost to each member is \$1.11 per month apportioned on a salary basis. The organization pays its members 65 per cent of their wages after the first three days' absence for sickness, for a period not to exceed 26 weeks. Salaried employees are carried on the payroll for three days in case of illness. *San Joaquin Power*, Oct. 1925, p. 12:1.

\$110,000.00 Worth of Stock

This amount (in 7% Cumulative Special Preferred Stock) is to be distributed to 87 employees of the Mead Pulp and Paper Company on January 1st as a result of their having invested small percentages of their earnings during the past five years. Payments on stock so subscribed for may be made in the following manner: Five per cent must be paid in cash with the subscription, and for the balance, a note without interest, running five years,

shall be given to the company with an agreement by the employee to make payments of equal amounts weekly or monthly until the principal of said note is paid.

This note shall be paid off by the employee subscribing for stock in the following manner, over a five-year period: The annual dividends of 7 per cent, amounting to \$35 in five years' time, on each \$100 share of stock, shall be applied toward the payment of this note. In addition a service premium of 2½ per cent per year on the amount of stock purchased, for employees who have been with the company more than five years and less than ten years, is awarded by the company to the subscriber, and this amount is also applied toward the payment of the note. For employees who have been with the company ten or more years this service premium is 5 per cent per year instead of 2½ per cent. For employees whose service with the company is less than five or less than ten years this service premium is based upon the actual number of years the employee will have been under either classification at the expiration of the five-year payment period, and the total amount of the premium applied toward the payment of the note is figured accordingly —part at 2½ per cent or 5 per cent as the case may be.

After the first cash payment of 5 per cent of the total face value of the stock being subscribed for is paid, and after the amount of the dividends and the service premiums have been deducted from the remaining 95 per cent of the stock, for which a note without interest is given, the balance shall be paid for by the employee subscriber in equal weekly or monthly amounts, over a period of 260 weeks until the remaining principal of the note is paid. *Mead Co-operation*, Dec. 1925, p. 5:4.

Stock Purchases

E. I. duPont de Nemours & Co. and California Petroleum Co. have announced plans under which the employees of both com-

panies may purchase the company's cumulative debenture stock at \$98 per share. Subscriptions are not to exceed 20 per cent of the employee's annual salary. For each dollar subscribed by an employee, the company will add 50 cents. *Industrial News, Survey*, Dec. 7, 1925.

Industrial Pensions

Employers are getting worried about the costs of their pension plans, which are rapidly increasing. A plan is described which shifts the financial burden and the long time part of the contract from the shoulders of the industrial company on to those of an established agency. The cost is decreased by introduction of the growing power of compound interest on slowly accumulating funds; by spreading the cost over the entire group instead of concentrating it on the old men; by removing the cash return feature which would nullify the whole plan because the men who most needed protection would be the ones who would not get their pensions. By Gorton James. *Industry*, Dec. 5, 1925, p. 1:2.

Our Wage Payment Recognizes Cost of Living, Length of Service, Efficiency

The Palmolive Company found that the requirements necessary for the proper performance of a job were skill, speed and strength, applied under different working conditions. Therefore, a job rate was established for these three requisites and allowance was made for good or adverse working conditions. It was decided that the cost of living should enter into the job rate and the United States Department of Labor's cost-of-living index was used as the standard; whenever there is a variation of 12½ per cent or more in this index, the basic wage automatically goes up or down to keep step.

A money value was established which was the lowest price of the job and also

one for its maximum requirements. The longer an employee is on the job the more efficient he is, and as a piece worker shows and earns his efficiency, he is given the length of service bonus to his hourly rate. Piece workers are assigned a basic hourly rate in the same manner as hourly workers, but are paid on the performance of certain definite tasks.

Under this plan the company is receiving much higher production per employee than before, and the employees are drawing higher pay. By J. A. Riley. *Factory*, Dec., 1925, p. 917:2.

Bonuses for Construction Organizations

A bonus plan has been in operation for superintendents, assistants and foremen in the Turner Construction Company for a number of years. A description of the plan is given, illustrated by two tables. By M. A. Darville. *Turner Constructor*, Oct.-Nov., 1925, p. 15:2.

Minority Conclusions and Recommendations of State Old Age Pensions Commission

Objections to old age pensions are explained and an outline is given of what is considered to be both a more effective and a more economical way of making adequate provision for the needs of the aged poor. By Frank H. Hardison and Allyn A. Young. *Industry*, Nov. 28, 1925, p. 1:6½.

Employees as Investors

One of the most striking facts about the American workman is his growing rôle as a stockholder, evolving naturally out of the idea of sound employment relations. The list of companies mentioned with a notable stock ownership record covers the Standard Oil Company, the Pennsylvania and New York Central Railroad Companies, Bethlehem Steel, the Bell System, Swift & Company, International Harvester Company, du Pont's and Eastman Kodak.

The reaction will come only when less responsive elements see in these vast invest-

ment possibilities of the wage-earner a new field for their operations. *Industrial Re-*

lations: Bloomfield's Labor Digest, Dec. 12, 1925.

Labor Relations: Collective Bargaining, Employee Representation, Arbitration.

Union Labor Far From Radical

How the appeal for an American Labor Mission to Russia met with a stinging rebuke from the President of the American Federation of Labor at their last convention. The declaration on wages formulated at Atlantic City accepts the wages system as its own and proposes to maintain within that system an equity or balance that will strengthen the system against unreasoned attack. This declaration concludes that wage earners are entitled to a steadily growing share of the growing output of our national industrial plant.

When the convention ordered an investigation of "company unions" it recorded something new. It wants to find out why company unions get a foothold, what they accomplish, their strength, and whether they can be converted into trade unions and if so, how.

Secretary Hoover is asked to call a conference of representatives of trade unions, trade associations and farmers, the purpose of which would be to get rid of the whole mesh of anti-combination and anti-conspiracy laws. Labor's period of admiration for the Sherman Law has passed.

The convention approved the principle of citizen's military training, denouncing pacifism and the bombast of militarism. By Chester M. Wright. *Nation's Business*, Dec., 1925, p. 44:3.

The Handwriting on the Wall

Every coal strike lessens sales resistance to power argument. A helpful factor in selling this service to the public is the good-will asset represented by the employment relations in the various public service corporations. Intelligence as well as technique characterize public utility management in our industrial centers. *Industrial Relations: Bloomfield's Labor Digest*, Dec. 12, 1925.

Industrial Relations

When the president of the J. H. Baker & Company, shoe manufacturers, recently announced his intention of liquidating the business, his employees outlined to him a proposal for the operation of the plant and obtained his consent. The plant and equipment will be turned over to the employees to operate for one year. *Industrial News Survey*, Dec. 14, 1925.

Shop Organization: Planning, Methods, Job Analysis, Standardization, Waste

The Budget System Applied to Construction Work

The theory and working of the estimate analysis in the control of labor costs of the Turner Construction Company is described in detail, and illustrated by a form used for determining from the estimate allowances the proper size of the labor gangs. By G. F. Floyd. *Turner Constructor*, Oct.-Nov., 1925, p. 6:2.

Spotting and Stopping the Wastes in Power Generation, Transmission and Application

A large chart illustrating possible wastes, anywhere from the fuel used to the way in which the power is applied to various machine tools, has been prepared by Francis Jurashek and F. H. Pearl as a supplement to: *Industrial Management*, Dec., 1925.

Tide Water Takes Drastic Measures to End Gasoline Substitution

The consumer campaign of the Tide Water Company started with a double page spread in five of the New York newspapers, telling the public of the "bootleg" gasoline and announcing that each intake pipe of every underground tank feeding a Tydol pump had been sealed after the tank was filled. Thus the public would be guaranteed quality gasoline, and the dealer's honesty would be apparent. A list of the Tydol dealers who are fighting "bootleg" gasoline was also published. Besides protecting the public, this campaign put acute pressure on each Tydol dealer, and resulted in their remarkable co-operation. *The Spade*, Nov., 1925, p. 11:2.

How the Camera Speeds Up Production

A copying camera or a blue print machine will speed up production and necessitate a smaller drafting force than otherwise. Photographic copying will save a manager money by enabling him to supply every worker with an exact copy of instructions at nominal cost, and by producing such copies in a few moments. Some practical examples are given illustrating the value of this method. By Harold P. Gould. *Management*, Dec., 1925, p. 50:3.

We Owe It to Diversification

"Always there will be jobs that do not fit into a standard mold. Either they must be left undone, under a standardized system, or someone must be found who will step out of line. We are marching out of line because we have found it to be profitable. Since 1892 we have specialized in break-

down and hurry-up jobs that were decidedly 'odd' and often tremendously 'difficult.'" The president of the Philadelphia Gear Works went on to tell how this was possible through the close co-operation of the office and shop and each individual. They have a special bonus plan which is based on the time saved by the worker in doing the job and have a definite plan for paying for overtime. By Eugene M. Pharo. *Business*, Dec., 1925, p. 13:1½.

Research and Experiment

Your Servant, Science

A picture is given of the place of scientific research in a great industry, especially as it is exemplified in the Research Laboratory of the General Electric Company. It is shown how science can serve industry and all its workers, and also industry's service to science. *Book No. 32*. Nela Park, Cleveland, Ohio. 60 pages.

Trade Unionism and Human Happiness

The trade unions of the United States are in the midst of great changes. They must recognize the need for better alignment between human nature and modern industry and to do this they must invoke the aid of the trained specialist: the anthropologist, the clinical physiologist, the psychopathologist and the psychologist. Another uncompleted field of research is the relation of the human mechanism to fatigue, and the discovery of those signs that will prevent fatigue from reaching the danger point and causing sickness or accidents. By Rex B. Hersey. *American Federationist*, Dec., 1925, p. 1149:5.

BUYING, RECEIVING, STORING, SHIPPING

Billions in Instalment Buying

The executive manager of the National Association of Credit Men thinks that the increasing habit of instalment buying will bear watching. In the case of household articles and even jewelry and clothing this

mode of selling is considered as healthy, and as A. R. Erskine, president of Studebaker, says: "This credit is in my opinion thoroughly sound and proper business. Above all, it raises the standard of living and increases the responsibility and there-

fore the efficiency and output of the workmen of industry." On the other hand, farsighted business men will sense possible economic dangers that might develop in even a short period of stringency. By J. H. Tregoe. *Nation's Business*, Dec., 1925, p. 22:2.

The Mysteries of Exporting

Experience is quite necessary. It is best for the man handling the market from the home office to live in the foreign country for a time and study the habits and customs

of the people. It must be determined whether the product is acceptable to the people of the country in question, and whether or not this product can be sold on a reasonably competitive basis. It is then necessary to find out if the details of packing and shipping necessary to send the material in good condition in the foreign field are possible of execution. An approach to American selling methods can be inaugurated if patience, diplomacy and an excessive amount of courtesy is used. By G. H. Nason. *Industry*, Dec. 5, 1925, p. 3:2½.

SALES MANAGEMENT

Great Power Systems Open Markets

The penetration of great power systems into isolated districts will add new customers for a long line of products. One great electric machinery builder finds that periods when the shops are turning out generating equipment in unusual volume are followed by an unusual volume of orders for motors and other apparatus required in putting power to work. Every household and farm and every small industry which is added to the clientele of a power company, becomes a customer for all sorts of electrical devices. A widespread, unified power system, with interchange of power on the most efficient and economical scale as typified in Central New England is highly desirable. By John Nelson. *Iron Age*, Dec. 17, 1925, p. 1689.

Budget System Seen as Great Benefit to Retailer

The Hub, a conservative Chicago clothing store, has adopted a budget system under which garments may be had on a cash payment of from one-fifth to one-fourth of the purchase price, the remainder being payable in ten equal weekly instalments. First, from a standpoint of enlarged outlet, the new plan is very successful. Then also in regard to the financial end this budget system is more

advantageous than the open charge accounts as the store gets its money quicker. Under this adaptation of the instalment system the sales have greatly increased. *Printers' Ink*, Dec. 10, 1925, p. 25:2¾.

We Get New Business from Complaints, Returns, Collections

The president of the Forbes and Wallace department store in Springfield, Mass., describes the methods by which his 53-year-old business has achieved one of the largest per capita volumes in the country. All verbal complaints are noted and sent to Mr. Wallace in writing. Employees never argue with a customer. The liberal policy on service and complaints was one of the essentials in the growth of the store. A novel feature is the picture gallery used for a customer's waiting room, containing such masters as Corot, Inness and Sargent.

All employees are given vacations with pay for two weeks in the summer and one week in the winter immediately following New Year's. They have group, life and accident insurance for the workers. The returned goods amount to about 10 per cent of the total sales but this is considered a service rather than an expense. Modern mechanical bookkeeping methods have been installed to offset the extra work involved in recording instalment and other sales

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necessitating credit. By Andrew B. Wallace. *System*, Dec., 1925, p. 691:4.

Latest Developments in Sales Department Equipment

Information is given in this report covering the application of different types of sales department equipment that have been found to be especially valuable in saving time and money, increasing the effectiveness of sales work, recording activities of the sales department and opening up potential markets. Methods and systems used by other sales managers are presented for comparison. *Report No. 216*. The Dartnell Corporation. 22 pages.

How to Reduce the Cost of Selling

Many agencies are at work in the endeavor to find means of reducing the prices charged for commodities, and manufacturers themselves are examining minutely the entire route of the product from raw materials to the ultimate consumer for the purpose of finding places at which costs may be reduced.

The main point of attack at the present time relates to the costs of distribution. Almost always a necessary preliminary to

the reduction of costs concerns itself with the control of costs. Without accurate knowledge of costs and an adequate measuring of the particular cost against the services or commodity which it secures, there can never be any certain or sound basis for taking the next step, i. e., a reduction of the cost of selling. The author, who is General Sales Manager of the Wahl Company, deals chiefly with the proper control of the costs of selling. By A. G. Frost. *N. A. C. A. Bulletin*, Dec. 1, 1925, p. 239:15.

Yes—Loading the Dealer Needs Defense

It needs defense from two angles—one is the ethics of the proposition; the other, the economic value of the plan. The author of the article takes care of the first part when he says that loading the dealer does not require any defense if the manufacturer stands ready to offer real resale help. His principal objection is that the plan is an expensive selling scheme. He then gives examples from the cracker, candy, pencil, and hardware lines, discussing the disadvantages of special drives to get rid of the surplus. By R. J. Dube. *Printers' Ink*, Nov. 26, 1925, p. 49:3.

Sales Promotion: Letters, House Organs, Advertising

The Best Thing We Ever Did for Our Jobbers' Salesmen

The Edward Katzinger Company reversed the usual procedure of trying to teach the salesmen facts about their product, by arranging a contest in which the men told what they already knew. That is, a premium was put on their knowledge, and they were given an opportunity to capitalize it. By Paul Crissey. *Sales Management*, Nov. 28, 1925, p. 722:1.

Eleven Millions for Fellowship

William H. Wilson was a traveling salesman; he sold furniture. Also, he spent several years selling an idea—the idea of centralizing the business. Wilson wondered why the displays of all big manu-

facturers could not be grouped in one city; indeed in one building. The American Furniture Mart is the result of that idea. The Mart is a sales building—and more. It is a club-house, a gathering place for the furniture trade. It serves its purpose. And it is paying for itself, and earning a profit besides. *Business*, Dec., 1925, p. 10:3.

How Much Should a National Sales Convention Cost?

A Connecticut manufacturer with sixty traveling representatives and four branch houses decided to solve the problems of the direct cost of a national sales convention, and whether it would cost more than to hold a series of sectional sales conventions. Figures are given showing that,

roughly, the cost of the former is double that of the latter. The ways of eliminating unnecessary items of expense are told. By Edmonds Woodbridge Maier. *Printers' Ink*, Dec. 3, 1925, p. 3:4.

Selling Policies That Eliminate Price Bickering

The American Rolling Mill Company has developed a new set of sales policies to meet competition by building a corporate personality. Although individuality will always be important in sales work there is room for a new general appreciation of the influence on sales of corporate personality and associational activity. By R. C. Todd. *Sales Management*, Dec. 12, 1925, p. 829:134.

When the Men "Play Hookey" from the Sales Meetings

In order to maintain the interest of the salesmen of the Equitable Life Assurance Society in their agency meetings, one of the plans is to have the meetings arranged for and conducted by the agents themselves. A second factor making for the success of

these meetings is to hold them for some specific purpose, announced and prepared for in advance. The third main consideration is that of having the meeting begin and end promptly according to schedule, with all agents present. The most satisfactory length for the weekly meetings seems to be one hour. By John A. Stevenson. *Sales Management*, Dec. 12, 1925, p. 825:134.

Advertising Survey Aids Western Sales

A special committee, which made an advertising survey as a basis for discussion at the National Distribution Conference, listed the effects of "proper advertising" as decreasing cost of selling, lowering costs of production, lowering prices to consumers, and, as a by-product, aiding the education of the public. But "proper advertising" must be based on an adequate study of markets and conditions. However, for the most part, there has been no accurate or authentic statistical information. The Chamber of Commerce of the United States has brought some order out of the statistical chaos in this survey. *The New York Evening Post*, Dec. 16, 1925.

Salesmen: Selection, Training, Compensation

When the Star Salesman Quits

The experience of a number of sales managers with star salesmen indicates that the great majority of the men who rank at the top of the sales force are men who have been with one company for a long term of service. They attain their position of leadership only after a thorough training in the policies of one company and after considerable experience in selling that company's products. *Sales Management*, Dec. 12, 1925, p. 795:2½.

What to Teach Salesmen

The committee on training salesmen of the National Machine Tool Builders' Association recently worked out an outline

according to which it was recommended that salesmen be trained. An outline is given under the sub-heads of 1. Development of sales ability. 2. Development of knowledge of product. 3. Familiarity with company's policies. 4. Familiarity with finance. 5. Development of personality. *Brick and Clay Record*, Dec. 8, 1925, p. 870:34.

Now We Have No More Ten O'Clock Salesmen

A profit-sharing plan which gives each salesman 40 per cent of the net profits on his sales, has resulted in a big increase in sales for the Dallas Paper Company, has enabled the men to double their earnings, and eliminates idling. By S. S. Mallinson.

Sales Management, Nov. 28, 1925, p. 727:1½.

All This Wild Advertising for Salesmen—

Sales managers agree that the present restlessness of salesmen, the increasing turnover among them, and the general lack of energy in sales forces, is due to three factors: 1. The vast increase in competition for salesmen brought on by the great number of direct selling organizations. 2. The gross exaggeration in much of the advertising for salesmen. The widespread efforts of manufacturers to hire each other's salesmen.

The Washington Nursery Company believes in having their already successful salesmen secure the new salesmen, as they know the type of men to select, and are often able to get in touch with desirable men looking for locations.

The basis of the entire selling endeavor of the Pure Silk Hosiery Mills, Inc., is not to "obtain" salesmen, but to "make" them. They have been very successful in taking men out of clerical and detail jobs and developing them into satisfactory producers. *Sales Management*, Dec. 12, 1925, p. 821:3½.

Leisurely Selling

Most salesmen would confuse this type of salesmanship with lazy or indolent selling. As a matter of fact, it represents the most daring type of selling imaginable. The fast, high-pressure type of selling is to the leisurely type—what tennis is to a game of golf. Golf appears to be tremendously simple and easy, devoid of all physical and mental exercise, in the same way the leisurely type of selling seems to carry no mental or accompanying physical strain. However, the truth is just the other way. Leisurely selling is a kind of teaching and building up. The big sales are all of this type as well as those sales of ideas,

ideals or new policies. Leisurely salesmanship is a fine and wonderful art. By Jesse Calvin. *Printers' Ink*, Nov. 26, 1925, p. 109:3.

Salesmen and Buyers and Their Attitudes

Assuming that both salesman and buyer are capable and well informed in the essential qualifications, their services to their firms could be rendered more effective if the salesman should work for a time in the purchasing department, and the buyer should have some selling experience. The efforts of each would thereby be rendered less expensive and more effective, and would facilitate greater efficiency in distribution. By Philip N. Case. *Belting, Transmission, Tools and Supplies*, Nov., 1925, p. 34:2.

Adventures in Retailing

The modern drug store is a business of side lines grouped around a prescription department. Dealers' helps and displays are used in drug stores to a far greater extent than in other lines. Moreover, there is more featuring of nationally advertised goods. Just now the chain drug stores seem to have the individual merchant at a disadvantage, but eventually the tide will turn. An independent merchant can make friends, and use his own initiative. The individual store has a human quality which people like. By J. R. Sprague. *Business*, Dec., 1925, p. 21:3½.

Methods of Handling Salesmen's Expenses

The practices of a number of concerns are stated and various means by which salesmen's expenses may be controlled are illustrated by examples. Two distinct classes of salesmen's expenses are considered: 1. The usual sort of traveling expenses incurred by road men. 2. Expenses which arise as a result of the use of an automobile by the salesmen. *Management Methods*. No. 5. Metropolitan Life Insurance Company. 9 pages.

Should a Sales Manager's Authority Go Past the Sales Department?

It is pointed out that although certain troubles within a business may not come under the supervision of the sales manager, yet he is the one to suffer. He ought to realize that he may become a better sales

manager just because he does know about other departments in the business. He may sell the production without troubling about other departments than his own, but this policy will not earn him promotion. By Eugene Whitmore. *Sales Management*, Nov. 28, 1925, p. 747:2.

Books Received

Managing the Interview. By J. C. Aspley. Dartnell Corporation, Chicago, 1925. 118 pages.

The Uses of Bank Funds. By Waldo F. Mitchell. University of Chicago Press, Chicago, 1925. 178 pages. \$2.00.

Survey of Books for Executives

The Coal Industry. By A. T. Shurick. Little, Brown and Co., Boston, 1924. 371 pages. \$3.50.

To describe the coal industry with any degree of comprehensiveness and understanding, one must have at least a layman's knowledge of a multitude of physical details of mine operation, of the coal markets, of the geology of the industry, of the human and social factors that are at the bottom of much of the industry's troubles, and of some rather complicated financial considerations which center in problems of cost and the valuation of mine properties. In discussing the coal industry with any degree of interest another prime requisite is impartiality and the ability to keep one's temper.

The coal industry, as John Hays Hammond has said, is "complex beyond belief." It is also exasperating beyond measure in one or more of its aspects, to different classes of people.

Mr. Shurick has thoroughly qualified as biographer of the industry in all the items herein demanded. He has produced a comprehensive, unbiased description of this much troubled industry, from the mine to the consumer's bin, which is without doubt the best work in its particular field. The coming report of the United States Coal Commission, upon whose data the author has drawn, will be more detailed and will

better serve the purpose of a "serious" student, who wishes to make his own deductions from original material. The subject of this review fits especially the needs of the thoughtful but more general reader. The text is never burdened with technical details and statistical proof, although a number of valuable statistical tables are included in the form of appendices; nevertheless, the author has succeeded in creating a feeling of confidence in the basis of his statements. The method of description is descriptive and critical but never controversial.

The coal industry is undergoing kaleidoscopic changes, chiefly in the direction of labor relations, and the more general use of mechanical devices. The great strike now on in the anthracite region may have far reaching consequences. It may cause some further shifting of markets as well as labor relationships. In some details, Mr. Shurick's book is out of date already, as for instance, when he writes of the scope of the United Mine Workers' influence. The bituminous industry is now seventy per cent non-union and thirty per cent union, a complete reversal of form in the last year or two. It is to be hoped that Mr. Shurick will find it possible, from time to time, to revise the text to meet the new conditions.

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excellent. Copious and well selected cuts add greatly to the interest of the text. *H. S. GILBERTSON, Director of Personnel, Lehigh Coal and Navigation Co.*

Shop and Office Forms. By Wallace Clark. McGraw-Hill, New York, 1925. 134 pages. \$2.50.

Anyone who is concerned with the preparation or use of forms in business will find in this little volume a clear, concise, presentation of the purposes which should determine the design of forms, and their economical use. The savings possible through eliminating unnecessary forms should appeal to any red tape hound and as the author says: "The most effective way of attacking the problem of weeding out unnecessary forms and the 'too much system' which goes with them, is to study the flow of work, determine what forms are absolutely essential to give instructions and provide records as the work moves forward, and then eliminate all forms which are merely interesting but not essential."

The chapter devoted to organizing a forms committee will be useful to the manager of shop or office who wishes to facilitate the adoption of higher standards in the design and use of forms. A procedure for the forms committee is outlined, also the authority placed in its hands.

Various types of forms are discussed and illustrated, such as: those for stores keeping, production, cost keeping, maintenance and inspection, sales, estimating, and purchasing.

There is also a chapter emphasizing the importance of proper stock keeping of forms, and a concluding one which points out that executive control through forms enables the manager to anticipate delays in production.

"The saving in time, gains in accuracy and reductions in cost of clerical work in shops and offices are almost invariably in direct proportion to the care and knowledge exercised by the management in the designing and handling of forms."

EDITH M. KING.

Consignments, Account Sales and Accounts Current. By E. J. Hammond. Isaac Pitman & Sons, N. Y., 1924. 150 pages. \$1.50.

This volume is unusual. It is a detailed and technical treatise on consignment transactions, account sales, and current accounts. It covers the subject most thoroughly, in fact, perhaps more in detail than was ever undertaken by any previous writer.

We consider this volume of considerable value in that it explicitly and signally takes care of a subject which is of prime importance in the transaction of business and is of value to all bookkeeping and accounting students, as well as business men, in general.

While the percentage of consignments in business in the United States is perhaps more or less limited, there is nevertheless a fair percentage of business transactions on this basis and there is hardly a company but has some more or less consignment business. In many cases this business is handled more or less haphazardly and proper accounts are not kept. This volume covers consignments so thoroughly and completely that it is hard to think of any phase which has not been taken care of.

On pages 41 to 50 inclusive, there are fully detailed entries of two methods of handling consignments, known as the First and Second method.

The First method, handling the transaction in minute detail and the passing of everything through the consignor's books, including the Journal, Cash Book, Personal Ledger, Consignment Ledger and Nominal or General Ledger. The Second method covers a transaction where only the net proceeds are passed through the financial books.

The Second method, naturally, cuts the entries down to a very small percentage of this for the First method and this Second method, wherever possible of adoption, will appeal to American business men.

Chapter 5—"Decimalization of Money" is a clever short cut for interest calculations in reducing fractions of a pound to decimals.

Chapters 11 and 12—"The Accounts of Joint Ventures" are worthy of distinct mention and of valuable assistance to any business man who anticipates being a party in a joint venture.

Taking the work as a whole, we would consider it a valuable addition to the student's and accountant's library.

W. F. WOODBURY, *Comptroller, The Wahl Company.*

Employees' Representation in Coal Mines. Ben M. Selekman & Mary Van Kleeck. Russell Sage Foundation, N. Y., 1924. 437 pages. \$2.00.

Employees' Representation in Steel Works. By Ben M. Selekman. Russell Sage Foundation, N. Y., 1924. 282 pages. \$1.50.

These volumes are the first of the long expected studies in industry made by the Russell Sage Foundation. They present the results of studies of employees' representation in the mines and the steel works of the Colorado Fuel & Iron Company. Internal evidence shows that at least some of the delay in publication was due to a painstaking desire to be accurate as to facts as well as conclusions, for a re-checking and re-investigation was made when the company officials questioned some parts of the studies upon the first manuscripts being submitted to them. In the form as issued they still failed to win the entire approval of the company officials.

Miss Mary Van Kleeck, Director of Industrial Studies, under whom these were planned and executed, in a foreword states the scope of the studies: "We are not primarily concerned with the conditions established, the rates of wages paid or the hours worked, except as these are the result of a larger influence on the part of employees. Our chief concern is to find out by what procedure conditions have been established and, particularly, how effective the voice of the workers has been in the process of determining them."

This singleness of purpose has been admirably adhered to in executing the stud-

ies, history and background being supplied only to clear the main theme. The results as offered between the covers of the two volumes hold material for extended comment on many widely different lines, but space here is limited and only two aspects can be suggested briefly. The studies are too important for anyone seriously interested in industry to neglect reading so it is not necessary to summarize them.

One of the lines of thought these books lead one to is that of the method of pursuing such investigation. Any writer on industrial relations must be prepared to face the charge of bias. Bias is a word almost as greatly abused as "radical" and has come to mean almost as little. It has come to be merely one of those self-protection epithets used to hide the hurt from adverse criticism. To anyone with even an average literary and critical sense, five minutes reading in these volumes would bring the convictions that here was an unusually steady and successful attempt to reduce bias to a mere chemical trace. This being so it is possible to tackle the problems on a vastly more important plane. Before you can think that I am about to expound a "scientific" method of investigation, I hasten to say that I am as sharply impatient of those who prate much of "objective validity" as I am of those who dismiss all sociological studies as worthless because unscientific. Those who take these extremes know little of science and nothing of philosophy. Mathematics is the only real simon pure science and it is so because it is outside the realm of "objects"—it is self-contained and self-provable. But when you take mathematics for a walk around in the everyday world, a surprising lot of things happen to it and you. After awhile you awaken to the fact that it is always an accessory after the fact; that while it will help you put your known world in order it will never lead you to anything unless you know all the important factors of it before you start; finally, and probably most reluctantly of all, you

will discover that all the so-called sciences—physics, chemistry, biology, et al—are not really "scientific" at all. Such a sightseeing jaunt into philosophy will then bring you to the shocking realization that the scientific method is nothing but a state of mind having as its base patience and its illumination and ingenuity in devising tests, and that all the marvelous accumulations of knowledge of the world about us have been mostly by the "cut and try method" patiently applied. There is nothing mysterious about a "scientific method;" there is something mysterious in the patience and common sense men will use to focus reality clearly.

All these commonplaces of philosophy are entered here as a background for a protest against a demand in sociological studies of impossibilities and stupidities of "method" on the ground that they are scientific, and equally a protest against checking all such studies out because they can not be scientific. The method used by Mr. Selekman in these studies of the Colorado Fuel & Iron Company are fully up to the standard of the laboratory worker and as such are scientific. There is every evidence of a patience to sift for fact, to classify, to draw conclusions cautiously. In fact, the caution of the author sometimes becomes painful. In an heroic effort to be impartial and objective, he is often as needlessly colorless as a government report. As a dramatic artist Mr. Selekman, it must be recorded, is below zero; his attempts to reproduce the speech of the people are not only unscientific, they are unhuman.

The vitally serious defect in these studies from the Sage Foundation is not one of method. It is one of material—the omission of an important factor in any understanding of employees' representation—the minds of the administrators or executives of every degree. There has been given in much detail, it is true, the formal statement of the purpose of the executives in establishing employees' representation, quite a lot about their hopes and some of their opinions in crises. But the patient interviewing, the sifting of states

of mind from acts, the effort to win confidences displayed among the employees nowhere shows as having been applied to the executives.

Now in spite of the fact that the history of the installation of the plan in Colorado shows that it was put into effect by the chief stockholder, I am confident that there are many of those executives who earnestly and sincerely want to make the plan do all that has been hoped for it. Those men have thought long about it, have worked patiently with it, have honestly tried to reach the mind of the employee. In thus grappling with these problems they have not lost sight of their obligations as executives, and they have been forced to a new appraisal of those obligations. Here is a rich field for results and yet there is no trace of it in these volumes. It is a grave defect, though not unusual; Mr. Selekman has neglected a factor that all other studies of employees' representation neglect. Some day may be told the intimate story of a work's council which enjoyed a brief and deserved fame. The dramatic point of the story will center in an outside group of highly intelligent, friendly advisers to the employees who neglected to investigate the minds of the executives and know their difficulties. They quite charmingly succeeded in killing and even embalming the object of their care and in the shortest possible time.

The books leave me with one puzzle, however. Why should the company executives refuse to accept the studies as a fair picture of the situation? Surely Mr. Rockefeller had no illusions about bringing instantaneous peace on earth and good will to all Colorado simply by applying a plan. Certainly Mr. Wellborn knows that any scheme of organization takes years to perfect. Why object to the statement that employees fear a foreman? We all know they do. And in any scheme of employee representation experienced executives know that the foreman is the greatest obstacle. Most of the grievances—such as seniority, rate adjustments—are in evidence in any industry; in unionized anthracite mines, for

instance. Why object to the statement that miners would rather join a union than a works organization? Anyone who has been amongst them knows they would. But why not be realists in these matters; accept facts—and use them.

PAYSON IRWIN, *Treasurer,
Gresham Realty Company*

Investment—A New Profession. By Henry S. Sturgis. Macmillan, New York, 1924. 210 pages. \$2.00.

Every young man employed in a financial institution should read this book. To do so will give him an understanding of the economic functions of the investment banker. He ought to obtain from its pages the enthusiasm and the inspiration to prepare himself in the evening college, or elsewhere, for a place in the new profession of Investment. He ought also to catch a vision of the large possibilities for service to the investing public by the individual, or staff, properly trained and equipped to render such a service on a high professional plane.

The book is very readable and helpful in suggesting the lines of research which should be followed in preparing a staff to give an investment service. There are pages devoted to the subjects, "which industry," "which company," "which securities." In these pages one might wish for a more specific analysis, by way of illustration of the method of research, but certainly the way is blazed and the method sufficiently suggested if one is industrious enough to search for the information.

The first seven pages are devoted to the economic functions of the investment banker. Then follow such additional subjects as "Mobilizing the Funds for Industry," "The Care of Invested Funds," "The Analysis of General Conditions," "Which Industry," "Analysis of Company Reports," "Which Company," "Which Securities," "The Investment Trust," "A Code of Ethics," "An Ideal Investment House," and "A Word to the Investor."

The author does not take the position that Investment Banking is now on a professional basis. The investment banker mobilizes small sums into large, for given industries. The broker facilitates the transfer of these funds into and out of securities, or from one industry to another. In many cases both functions are performed by the same organization. The increase in the number and variety of securities vastly complicates the care of invested funds and seems to call for the added function of supervision—an investment service "not warped by the necessity to sell." However these functions "must be strictly divided for they cannot be accomplished simultaneously with justice to both industry and the investor."

"The service of the dealer in securities to industry and to investors can be put upon a professional basis. To do so will mean more careful work and greater study than is current except in exceptional quarters. It will probably mean the use of the economist and something more than a haphazard analysis of business and economic conditions. It will mean a more detailed study of corporations and their securities than is now made. It will mean some dependence upon the new science of the use and interpretation of business statistics, and the application of the principles of speculation—that is, foresight based upon careful, trained and intelligent study of complete information. There will probably be, too, greater research in securities thereby adding to the present knowledge."

In conclusion the author states that the result would be a tendency "to raise the plane of the investment business to that of a profession, add to its prestige," and "direct the flow of funds away from unsound enterprises and into those which are good. It would reduce the cost of financing and help industry. All these would be distinct additions to the economic welfare of the nation."

BIRL E. SHULTZ, *Educational Director,
New York Stock Exchange*